

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** An autoclave package containing a product therein and, comprising a fibre-based packaging material treated with a hydrophobic size and comprising on the inside and/or outside of the fibre substrate one or more layers for reduced water penetration, the package having been treated under pressure at a temperature of 100 to 250 °C for a time of 5 min to 30 h, wherein

the fibre substrate has been treated with a hydrophobic size, an aluminium compound and a wet-strength size for increased heat resistance of the packaging material,

the hydrophobic size has been used in an amount of 0.5 to 3.0 kg/t of dry fiber substrate,
and

the weight ratio of hydrophobic size to the aluminium compound is ~~1:0.1-1:10~~ 1:0.5-1:5.

2-3. (Cancelled)

4. (Previously Presented) A package as defined in claim 1, wherein the hydrophobic size comprises at least one size selected from the group consisting of alkenyl succinic acid anhydride (ASA) and alkyl ketene dimer (AKD).

5. (Previously Presented) A package as defined in claim 1, wherein the hydrophobic size comprises an ASA size.

6. (Previously Presented) A package as defined in claim 1, wherein the aluminium compound has been used in an amount of 1.0–20 kg/t of dry fibre substrate.

7. (Previously Presented) A package as defined in claim 1, wherein the aluminium compound comprises aluminium salt.

8. (Previously Presented) A package as defined in claim 1, wherein the wet-strength size has been used in an amount of 0.2–12 kg/t of dry fibre substrate.

9. (Previously Presented) A package as defined in claim 1, wherein the wet-strength size contains polyamido amine epichlorine hydrine resin (PAAE size).

10. (Previously Presented) A package as defined in claim 1, wherein the layer for reduced water penetration of the packaging material comprises a polymer coating.

11. (Previously Presented) A package as defined in claim 1, wherein the packaging material comprises in the following order: a polymer heat-sealing layer, a white-pigmented polymer layer, a polymer layer containing black pigment, a treated fibre substrate, one or more polymer oxygen-barrier layers, a binder layer, a grey-pigmented polymer light-shield layer and a polymer heat-seal layer.

12. (Previously Presented) A package as defined in claim 1, wherein a filler has been added to the fibre substrate for increased heat resistance of the package.

13. (Previously Presented) A package as defined in claim 1, wherein the fibre substrate comprises at least one selected from the group consisting of wrapping paper and board.

14. (Currently Amended) A packaging material for autoclave product packages, comprising a fibre substrate treated with a hydrophobic size and coated at least on one side with a layer for reduced water penetration, wherein

the fibre substrate of the packaging material has been treated with a hydrophobic size, an aluminium compound and a wet-strength size for increased heat resistance of the packaging material,

the hydrophobic size has been used in an amount of 0.5 to 3.0 kg/t of dry fiber substrate,
and

the weight ratio of hydrophobic size to the aluminium compound is ~~1:0.1-1:10~~ 1:0.5-1:5.

15. (Currently Amended) A method for manufacturing a fibre-based packaging material for an autoclave product package, the method comprising treating the fibre substrate with a hydrophobic size and coating at least one side of the fibre substrate with a polymer layer for reduced water penetration, wherein

the fibre substrate is treated with a hydrophobic size, an aluminium compound and a wet-strength size for increased heat resistance of the packaging material, and

the hydrophobic size has been used in an amount of 0.5 to 3. kg/t of dry fiber substrate,
and the weight ratio of hydrophobic size to the aluminium compound is ~~1:0.1-1:10~~ 1:0.5-1:5.

16. (Previously Presented) A method as defined in claim 15, wherein the heat resistance of the package is further enhanced by controlling the structure of the fibre substrate by at least one process selected from the group consisting of refining, wet-pressing, calendering and Condebelt drying of the pulp.

17. (Previously Presented) A method as defined in claim 15 or 16, wherein a filler is added to the fibre substrate for increased heat resistance of the package.

18. (Currently Amended) A method for autoclave treatment, comprising using a combination of an aluminium compound, a hydrophobic size and a wet-strength size for increased autoclaving heat resistance of a product package made of a fibre-based packaging material, such as reduced raw-edge penetration, in autoclaving under pressure at a temperature of 100 to 250 °C for a time of 5 min to 30 h.

19. (Currently Amended) A method for autoclave treatment of a product package comprising a fibre-based packaging material treated with a hydrophobic size and comprising on the inside and/or outside of the fibre substrate one or more layers for reduced water penetration, [[,]] comprising:

treating a fibre substrate with a hydrophobic size, an aluminium compound and a wet-strength size for reduced raw-edge water penetration of the packaging material, the weight ratio of hydrophobic size to the aluminium compound being 1:0.1 – 1:10; and

autoclaving the package under pressure with the aid of vapour at a temperature of 100 to 250 °C for a time of 5 min to 30 h.